SID MOULAY, THE TALIB

A Story of Morocco.

By Elissa Rhais.

Translated by WILLIAM L. McPHERSON.

IN the gloomy forest of Bouyaya, one of the oldest in Morocco, lived a poor woodcutter and his family. The winter was severe. The wood was soaked, and life was hard. Sid Moulay said to his wife one morning:

"Do you know, wife, that we are going to test the proverb: 'If you change, you gain'? We are going to leave this place at once and go wherever God directs our steps."

Bou-zemzem answered:

"Husband, you are mad. Where would you have God lead us in this bitter season—us and our seven children, scantily clothed and without a cent? That's something we shall never do. We know this forest, and it knows us."

But Sid Moulay had made up his mind. They had suffered too much. He didn't want to stay a day longer in the forest, which was as black as his own luck.

On the morrow, then, the father, the mother and the seven children marched off in Indian file through the tall cedars and the spreading banyans. Each one carried a tiny bundle of clothes on his shoulders. They left Bouyaya in anguish of heart, in search of a better world.

For several days they walked through solitudes, over snow and mud, bitten by the north winds. One evening they reached the edge of a vast plain. Worn out, they halted there and refreshed themselves with some morsels of black bread.

They were about to resume their journey when Sid Moulay, lifting his bundle, noticed in the grass an old mutilated book, a sort of Kitab.

"I never found anything in my whole life till now," he said to his wife. "I swear by my head that I will take it along with me."

"Husband, you are crazy," cried Bou-zemzem. "We are all tired out, and the way is long. What tells you to load yourself up further with that heavy and useless book?"

"Yes, yes. I mean to keep it."

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THE family took up its melancholy march. They walked for days and days. Finally they came in sight of a large city. An abandoned house, outside the ramparts, offered them shelter. Bou-zemzem stuffed the cracks with pieces of bagging, put the children to sleep, and then began to unpack the bundles.

Sid Moulay took his Kitab and sat down near the city gate to rest. The big book was on his knees, and he turned the parchment leaves with an air of scholarly absorption.

A passerby, imagining him to be a talib (learned man), tossed him a piece of money.

"Ah!" thought Sid Moulay "this is going to be a lucky day!"

A second merchant passed and gave him another coin; then a third, and a fourth. So it continued, and at the end of the day Sid Moulay had taken in enough to supply his own wants and those of his family.

Amazed at his success, he kept turning over the pages of his book from morning to evening, and his attitude became more and more mystical. Each day brought its offering. Sid Moulay blessed the saying which recommends men to change and gain, for, by Allah, he would soon be rich without doing anything.

One morning he saw a negress approaching. She had an enormous figure and was dressed in red silk. When she reached his side she was breathless, her cheeks were dripping perspiration, and her blood-shot eyes were almost popping out of her head.

"Sid Talib," she said, "the sultan wants you."

"The sultan?" asked Sid Moulay, anxiously. "The sultan? How can he want me? What has happened? What does he want?"

"The sultan wishes to see you at once."

"All right. Go on ahead. I'll be there," stammered the former woodchopper, who was shaking with fright.

The negress went away.

Sid Moulay re-entered the ruined house, kissed his wife and his children, and said to them:

"Allah alone knows whether I shall ever come back."

At that period "sultan" in Morocco was a synonym for "head chopper."

Very deliberately Sid Moulay made his way to the palace. He was received there with the honors due to a spy.

"Talib," the sultan said to him, "this morning my daughter laid a very valuable ring on the edge of her bathing pool. The ring has disappeared. No one ever goes into that wing of the palace but the negresses and the eunuchs. Not even a bird could fly in, dies surfeited—let God not bring him back to life."

The sultan promised to send him seven magnificent fowls, and then dismissed him.

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BUT scarcely had he descended the last steps of the palace staircase when a negress rushed out from a mosaic passage way, her arms in the air, her eyes wild with terror.

"Sidi, my good Sidi," she cried, prostrating herself at his feet and kissing his knees and his hands. "My good Sidi, everything I have saved I will give you. Spare me, spare my head, that God may spare yours!"

"What do you want?" asked Sid Moulay, severely, for he began to see a light.

"Master, it was I, the negress Sahla. You haven't opened your book yet, or you would already know my name!"

She redoubled her kisses and implorings.

"O wise master, pardon me! I swear to you that I'll never do it again. It is the first time and the last."

Sid Moulay put on his most impressive air.

"Take care, Sahla! The next time——"

"No, no, Sidi. By Allah I swear it."

"Very well," he finally agreed. "But here is what you must do. You must take the ring which you stole from your mistress, roll it in a little piece of bread, and make a fat goose in the Sultan's poultry yard swallow it. And don't forget to tie about the goose's foot a little piece—a very little piece—of red ribbon."

"Certainly, Sidi, certainly," the slave blubbered, overcome with gratitude, and kissing the hem of his cloak with fresh fervor.

"Wife," exclaimed Sid Moulay, when he re-entered his hut, "the thing went off like honey!"

Each morning for seven days they killed one of the chickens, and ate and drank to the glory of the sultan. On the seventh day Sid Moulay arrived at the palace, his big kitab under his arm, and a very serious look on his face.

Once ni the presence of the sultan and a throng of notables, he asked to have a little incense burner brought in. He lighted the incense, turned over seven or eight pages of the kitab, murmured prayers which nobody understood, and then arose and said to the audience:

"Follow me to the sultan's poultry yard."

Curiosity ran high. The spectators held their breath.

Sid Moulay looked calmly around the poultry yard, and soon recognized the goose which had a tiny red ribbon about its foot. He cried out:

"There he is, the robber! Open his stomach."

And, oh, what a surprise! The sorcerer picked the ring from out the smoking entrails, and passed it to the onlookers, who were speechless with admiration.

"A master among masters!" the sultan exclaimed. "Fill his bag with sequins."

"Wife," said Sid Moulay when he got home, "make ready. We are going to leave this place. I have earned enough today for us to live on for a hundred years."

But when Bou-zemzem saw the avalanche of sequins she protested:

"Leave this country, O my Sidi? Leave a country which has given us a living from the first day we came here? We shall never do that. We are in clover."

"You may be," Sid Moulay answered doubtfully. "But as for me, my stomach beat today like a drum. Listen, wife, it is much better that we should go."

But Bou-semsem wouldn't hear of it. Weary with arguing the question, Sid Moulay seated himself again at the city gate with his kitab on his knees.

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THE days passed quietly, Allah still showing them his favor. One morning word passed through the city that the sultan had been robbed of his treasure. Two court officers came in search of the talib.

"Master," they said, "the sultan's treasure was stolen last night. But the sultan isn't worried. He counts on you. For you knew how to discover the princess' ring in the stomach of a goose."

Poor Moulay had a hard time concealing his chagrin. He answered again that the recovery would be easy, and demanded the seven biggest and fattest chickens in the sultan's poultry yard and seven days in which to think. When the officers were gone he said to Bou-zemzem:

"Wife, we can be sure about it this time? On the seventh day the sultan will do some head cutting."

That evening the family was seated about a low table. The remains of the first chicken lay on a plate, still swimming in a reddish-colored sauce. Sid Moulay pointed with his finger to the remnants and then traced the course which what he had eaten had taken from his mouth to his stomach.



"SIDI, MY GOOD SIDI," SHE CRIED, PROSTRATING HERSELF AT HIS FEET. "MY GOOD SIDI, EVERYTHING I HAVE SAVED I WILL GIVE YOU. SPARE ME, SPARE MY HEAD!"

"Wife," he said, "one has arrived. There are six more."

They didn't see a man who was listening outside in the darkness, his ear at a chink in the wall, and who, when he heard these last words, threw up his arms and fled away into the city. He rejoined there, in a few minutes, his companions, six in number, all employed in the sultan's kitchens.

"Brethren," he told them, "I had hardly got my ear to the wall when the Master Talib said: 'One of them has arrived. There are six more.'"

The sultan's servitors had stolen the treasure. Suspecting that their master would appeal again to the Talib's science, they had sent one of their band to spy upon the sayings and doings in the ruined house outside the wall. The next night they sent a second investigator along with the first. And the two thieves heard these words:

"Wife, two have arrived. There are five more."

The next evening three came to eavesdrop. And Sid Moulay, speaking as usual of the chickens, said:

"Wife, three have arrived. There are four more."

So it went on up to the seventh day. Then all the robbers came together to the hut. Sid Moulay hadn't had a single idea so far. Half-choked with despair and anguish, he articulated:

"My children, all seven have arrived. Tomorrow the sultan will do some head cutting."

At these words the robbers burst into the room.

"Master, save us! Save us and God will preserve you! Protect us and God will protect you! If you will grant us your pardon, your fortune will be made."

Sid Moulay, at first startled, began to breathe more freely. Then he played his comedy as an all-powerful talib. He declared in a voice of thunder that this robbery was an affront to his science. How did people still dare to commit thefts when they knew that nothing could be hidden from him? He made them promise that they would never do from him? He made them swear by Allah. Finally he ordered them to go and bury the treasure well outside the ramparts at a certain distance from a well known marabout and to mark the spot with a clean, blue-colored stone.

"It will be done as you command, master."

Tremblingly they laid at his feet a bag of sequins—the savings of a lifetime—and withdrew with additional supplications.

The next day the whole city was gathered to wonder at the superhuman art with which the talib, Sid Moulay—may God bless him—would discover the hiding place of the sultan's treasure. The countryside was black with people. The sorcerer, followed by the sultan and his viziers, walked a certain distance from the marabout. He halted before the blue-colored stone, which he recognized, read in the big kitab, offered some prayers and made some cabalistic gestures over the incense box. Then he turned to some men who were waiting with shovels in their hands.

"Dig here," he ordered.

About two feet below the surfact the sultan's treasure was uncovered.

The throng acclaimed Sid Moulay. The sultan kissed his hand and sent him home with an escort and a packmule laden with gold.

Sid Moulay again implored his wife to leave the country.

"The first time it was honey," he said to her. "The second time it was butter."

But women are superstitious, and also love money. Bou-zemzem refused to quit a place where they had had such good fortune.

From that day on, in fact, Sid Moulay lived tranquilly. He was rich beyond his desires. His reputation as an infallible sorcerer was established. No good Mussulman any longer dared to commit robbery. The guilty would be discovered immediately, and any one in the city who had lost a coin could be sure of finding it replaced within a few days. Sid Moulay, in his prosperity, kept repeating the proverb: "Work on your reputation until it spreads. When it has spread it will work for you."

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NEVERTHELESS, Sid Moulay's peace of mind did not last. The prince of a neighboring region had heard tales of Moulay and his sorcery. People told him of the miracles which Sid had performed. The prince was a good son of Allah, but a little skeptical. He asked the sultan to send him this talib, of whom there was so much talk. He wished, he said, to inquire as to the whereabouts of some articles recently stolen from him.

When Moulay heard this news he was panic-stricken. He said to Bou-zemzem:

"Wife, the first was honey; the second was butter; the third will be pitch. This time, surely, it means death."

Sid Moulay was received in the new country with great pomp. The prince himself came to meet him, accompanied by his three young sons. At the palace a feast was given in his honor. He scarcely touched the succulent viands and failed to enter into the joyous conversation about him. He was profoundly troubled and began to lose his self-command.

At the end of the meal the prince said to him:

"Master Talib, I want to make you acquainted with a loss which I suffered about four days ago."

There was a deep silence in the hall. The eunuchs and other servitors listened breathlessly. The prince's children were mute, but the traces of a malicious smile showed at the corners of their mouths.

The former woodcutter couldn't wait to hear anything more. He resolved to tell everything, to confess everything. He felt that frankness would be, under the circumstances, the surest means of saving his head.

"Prince," he began—"Prince, the first was honey, the second was butter, the third is pitch."

But what was his stupefaction when he heard the children roll over on the couches and shout:

"That's right! That's right! Sid Talib has guessed it."

At the same time a chorus of yow-yows came from behind a curtain.

"May God bless the wise man! May God protect him from the evil eye!" cried the women of the court, who were invisible.

The children clapped their hands in excitemen and repeated together:

"He is right father! He has guessed it!"

The prince arose. Lively emotion and sincere admiration were pictured on his face. He came over and saluted the great talib. Then, taking him by the arm, while poor Sid Moulay did not know yet whether he could believe his eyes or his ears, he led him into the palace garden.

"In truth," said the prince, "I doubted your power, which people said was so enormous. I wanted to test it. The three jars which I had buried in the back of my garden contained one of them honey, the second butter and the third pitch."

In the presence of the dumfounded Sid Moulay, a negro slave uncovered the three jars to the sun's rays.

The prince overwhelmed Sid Moulay with gifts. A whole caravan escorted him back to the sultan's capital. But before he re-entered his house Sid Moulay shaped himself a paddle out of a piece of fir tree, with which to threaten his wife if she insisted on living any longer in the sultan's domain.

"Hurry up, wife," he cried, "or may God burn your bones on the day of your death! Make haste! We must disappear at once. We are bloated with wealth."

Bou-zemgem made no opposition this time.

And thereafter no one ever heard anything of Sid Moulay, the wonderful talib.

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Courtesy in a Cage.

The tellers of the bank are the points of contact with the bank's customers, where the nerves are most sensitive. But there are tellers who care nothing about it, and there must be a great many of these, otherwise there would not be so much preaching about courtesy. The matter came up in a recent conference of bankers in Philadelphia, where the question was asked whether better results might not be achieved by substituting woman tellers, especially woman paying tellers. Will the line at the window be more patient if a woman serves at the other end? And is femininity less subject to these spells of uppishness and surliness that we have to submit to so frequently?

As a rule the people who go to the tellers' windows are the employes of the customers and not the customers themselves. The discourteous or peevish teller feels no restraint to control his temper toward any of these. The latter are likely to swallow their resentment and say nothing about it. On the other hand the mental and nervous strain under which so many tellers are compelled to work should be allowed for. The line should realize that this job is not a soft snap. A cross word or a sharp retort may be a mere symptom of strain and should be regarded as the manifestation of a physiological rather than a moral condition.—Bankers' Home Magazine.

Advocates Silent Dances.

People who bewailed the invention of the printing press, the airplane and the telephone, because they educate people too much, will get a "kick" out of the statement of Yvonne Sorac, who advocates the latest supersensation—the silent dance.

Just when music and movement is getting its post-revolutionary finish, here comes a lady who says music should be barred from the dance. Nymphs of the terpsichore shall bathe in the resources of their own billowy rhythm. They shall not sail on the stormy seas of syncopation. Neither shall they ascend the heights of a Strauss waltz or a Chopin prelude.

The modern ballet with music is a horror to Mme. Yvonne, and all Paris is finding it out whether or not our own terpsichorean colony wish to countenance or disbelieve. Paris is making a vogue of the silent dance.

Some call Mme. Yvonne a "crank." Mebbe so. Of course, "cranks" rise and fall on their own initiative. If they happen to be cranky on the right thing and their crankiness becomes popular, then they become great discoverers, modernists, individualists, geniuses.

Arguments in favor of the silent dance might be worked out through metaphysics or even the laws of every-day mathematical and unimaginative physics. Everything in nature has its own rhythm—even unto a seasick man leaning against the taffrail nature has her own inexorable, indomitable rhythms.

If the dancer listens may he not find his music in his own soul and hear that instinctive music which comes to him who listens to the inner self?

But in the event of the silent dance becoming internationally popular, what is going to happen to the dance fairies of India and Egypt and Constantinople and the American dramatic school? And where shall we put the "Dance of the Hours" and Delibes' and Strauss' waltzes, etc.

Borrowed.

Mary came in from recess chewing gum for dear life. The teacher noticed her and said sharply:

"Mary, come here and put your gum in the waste basket."

Mary took the gum from her mouth but did not put it in the waste basket. And again the teacher said: "Mary, I told you to put that gum in the waste basket."

This time Mary started to cry and replied:

"Miss J., I won't chew the gum any more, but I can't put it in the basket. It's my sister's gum and I have to give it back at noon."

GOOD-BYE TO BALD HEADS, IF UNCLE SAM'S LATEST DISCOVERY ABOUT THE LOWLY PEANUT TURNS OUT A SUCCESS

CHEMISTS in Department of Agriculture Find That a Peanut Menu Results in a Growth of Hair on Rats—Girl Employes of Department Discover the Experiment, and There Is a Rush for the Peanut Vendors' Carts—The Rare Acid Called Cystine Which Is Being Isolated—Chemist Explains the Latest Experiments.

Girls employed in the bureau of chemistry in the Department of Agriculture have gone suddenly "peanut-crazy." Peanut venders who formerly managed to eke out a meager existence shoving a cart along from corner to corner are now jostling for points of vantage near the building on 13th street southwest, where business recently has taken on a bonanza aspect.

Such has become the habit with the young ladies that small bags of peanuts, for convenience sake, usually of the salted variety, are daily smuggled into vanity bags and lunch packages and into the various offices of the bureau, later to be munched during work hours in synchronization with the pounding of typewriters and the syncopation of other office noises.

While the craze originated with the girls, it is said that a number of the men, significantly of the bald or near-bald type, have stealthily espoused the cause of the heretofore lowly peanut, with the result that the prediction has been made that before long Virginia's foremost fabacious product of the soil will become America's premier table delicacy.

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IT all has come about because one of the fair clerks in the bureau of chemistry by chance came across a paragraph in a very technical bulletin she was typing which arrested her attention as nothing else in dozens of similar papers had done. This paragraph told of the remarkable results from a hirsute and from a corpulent standpoint which were obtained when rats, previously fed on a bean or corn diet, were changed to a peanut menu.

The stenographer pondered.

If rats' fur, or hair, or whatever it is they have, was benefited by the peanuts, why wouldn't her own silky locks, previously bobbed by Danie Fashion and lately disowned by the same lady, take a new lease on life if treated to a similar diet? She asked a laboratory assistant about it. He advised her that he thought the idea was a good one. The growth of hair on the rats, he explained, while a side issue from the experiments being performed, nevertheless occurred. This was due to the large content of a rare acid, called cystine, in the peanuts. A German scientist, he added, is isolating this cystine at the present time with a view to putting it on the market as a hair restorer.

That sounded encouraging to a girl whose evenings before the mirror had been fraught with fear that nothing could induce her abbreviated hair to attain normal length, as the change in style of headdress demanded. She confided her discovery to her chum, and as it was to be kept a secret between the two, the chum refused to tell any one about it, except her sister and a close friend at the next desk—and so the dark secret is now guarded faithfully by most of the girls in the bureau.

From that moment peanuts began to come into their own over southwest way. Several male friends got hold of the secret and men commenced to be seen crunching peanut brittle, where peanut brittle once had been denied entree. Several of the young ladies, however, have steadfastly refrained from indulging in the legume fest. On being pressed for a reason they frankly admitted they feared that the hair-propagating activities of the peanuts might spread to the fair faces into which the kernels, if they can be so designated, were being fed. Laboratory experts confessed they had not thought of that contingency and stated they had no data on the subject. So some of the girls have adopted a watchful waiting policy, with the smooth texture of their workmates' cheeks constituting the cynosure of daily inspections.

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A NEWSPAPER correspondent, hearing of the strange developments at Uncle Sam's Agricultural Department, journeyed to the scene of festivities and interviewed the chemists whose researches and experiments with rats and peanuts had accomplished such far-reaching and probably unforeseen results.

Dr. D. Breese Jones, in charge of the protein investigation laboratory of the bureau of chemistry, was approached, and he readily consented to explain all about cystine and what effect it had on rats.

"There are at present more than 150 white, or albino, rats in individual cages being experimented on by Dr. Jones and his associates in connection with nutrition researches. At times Dr. Jones has had as many as 250 of the pale rodents under observation. Probably as a precaution against precipitation of a wholesale scare among the feminine employes of the bureau, should their proximity to these scores of rats be known, he has housed the animals in sort of a barn, or garage, fronting on an alley in the rear of the chemistry building. There may be seen rats in all stages of growth and in all conditions of health, varying with age, sex, dieting, etc. Dr. Jones concerns himself with the study of proteins and their comparative nutritive values, with a view to recommending to farmers of the country the proper feeds and proportions thereof necessary to the healthy growth of such barnyard animals as pigs, cattle, sheep and horses.

Dr. Jones pointed out a particularly disreputable specimen of rat—in body broken, in spirit dejected and in furry covering decidedly not de trop.

"This fellow," explained the chemist, "has been deprived of cystine."

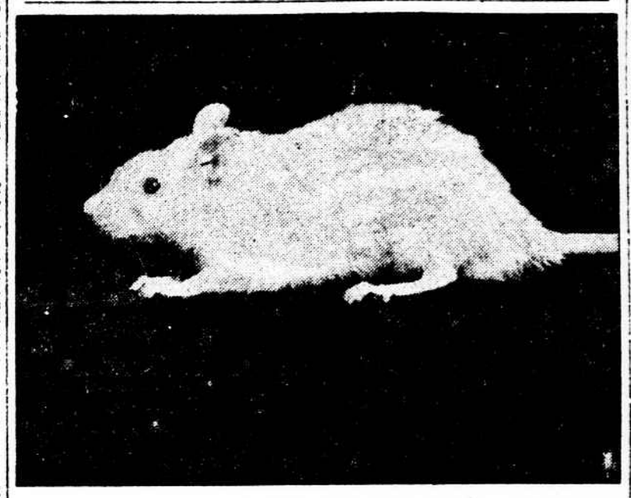
It was easy enough for the writer to see that the deprivation had hurt the rat's feelings. He looked as if his last friend had been the victim of feline outrages. Dr. Jones pointed to a neighboring cage.

"This one was given a certain percentage of cystine in his food," he said.

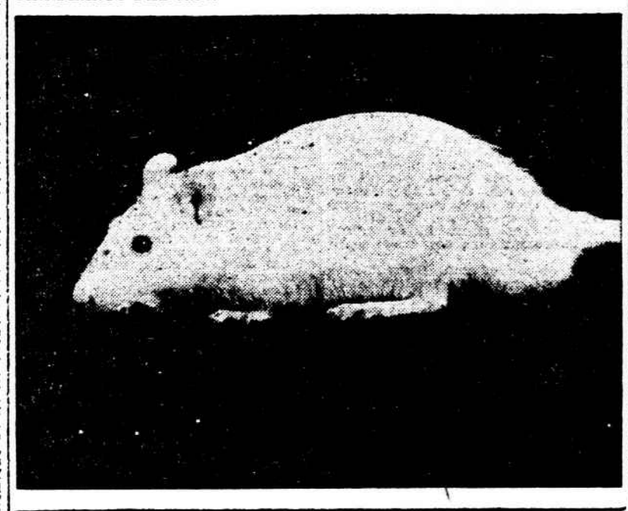
The favored rodent indicated was the picture of young rathood. He was fat, sleek and capricious. Most noticeable of all, he was possessed of a thick coat of rat fur, and intelligently enough, the blond prince of household pests proceeded to emphasize this fact by launching into a tongue massage. The cystine-intoxicated rat clearly was the better for lack of prohibition.

"How do you feed these rodents said cystine?" Dr. Jones was asked.

"Peanuts," was the elucidating reply. "The first rat was fed on a diet consisting principally of navy bean meal. Navy bean proteins are deficient in cystine—one of the eighteen amino-acids which go to make up a complete, nutritive protein molecule. Peanut meal has been found to have proteins containing this very necessary amino-acid. The second rat was given exactly the same diet as the first, except that a percentage of the bean meal was replaced by peanut meal. Chemically, the only difference in the food given the two was in the addition of cystine contained in the peanut meal. In making these experiments we did not use the two rats only, but treated numbers at a time similarly, so that the average condition could be noted. Instead of beans a number were fed corn, with like results."



WHAT THE LOWLY PEANUT DOES FOR A RAT. ABOVE: THIS FELLOW'S MEALS CONSIST MAINLY OF A CORN MEAL DIET. BELOW: THE PEANUT-FED RAT.



Dr. Jones then undertook to explain plain to the lay reporter a number of things about proteins, and particularly cystine. Proteins, he asserted, were molecules found in food. They are as necessary to body development as the much-heralded vitamines, the starch, the salt, fat and other food constituents. Some proteins are more nutritive than others, as proved in the tests with bean proteins and peanut proteins. He picked up a pamphlet published by the bureau recently and read:

"A great advance was made in our knowledge of the principles of nutrition when it was shown that the nutritive value of proteins depends on the relative proportions of certain amino-acids in the protein molecule. Numerous experiments have demonstrated that the withdrawal or addition of certain amino-acids renders diets deficient or makes them complete for normal growth. It is well known that proteins which lack either lysine or tryptophane fail to promote the growth of animals. It has also been established that certain other amino-acids are necessary for maintenance and growth, and that some of the amino-acids usually found in proteins are not essential.

"Osborne and Mendel found that rats fed on raw navy bean meal declined rapidly in weight and soon died. When the bean meal was cooked slight growth was obtained for some time. Baked beans showed no greater efficiency than cooked bean meal. We found that cooked navy bean meal, supplemented with crystine equivalent to 2 per cent of its protein, produced normal growth. This diet contained butter fat to furnish fat-soluble vitamines. The salts were furnished by an artificial salt mixture and the beans supplied sufficient water soluble vitamine."

The summary of this pamphlet was as follows:

"1. Cystine has been shown to be essential for normal growth.

"2. Phaseolin, the principal protein of the navy bean, is rendered a more efficient food by heating with water.

"3. Cooked phaseolin, or cooked navy bean meal, when supplemented with cystine, furnished adequate protein for normal growth."

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SENSING a story in the derogatory allegations made regarding Boston's favorite dessert—baked beans—the writer asked Dr. Jones if the Army and Navy had been all wrong in feeding this popular dish to Uncle Sam's hungry soldiers and sailors. The reply did not impunge the good judgment of the Army and Navy cook, however. Dr. Jones pointed out that while the bean is lacking in the essential cystine, other proteins contained in supplementary dishes furnished the required amount of this amino-acid. If the service men, under stringency of war conditions, were to be fed beans alone for breakfast, lunch and dinner, from soup to dessert, nothing but beans, as some doughboys solemnly allege, the men of the Army and Navy would stop growing and eventually would die for lack of cystine. The scientist also cited the possibility of an arctic explorer being left with nothing but beans to eat, with dire results.

"How about cystine's effect on hair?" Dr. Jones was asked.

"Our experiments with rats have shown us that cystine apparently encourages the growth of fur on the rats. As a matter of fact, wool, hair and fur have been found to consist largely of this acid, and the easiest way for us to isolate cystine is by treating sheeps' wool with hydrochloric acid and subjecting the resultant mixture to a number of complicated chemical processes."

The chemist pointed to a mass of glassware, comprising retorts, tubing, bottles, vials, funnels and other laboratory utensils, all connected in a seemingly haphazard fashion with short pieces of rubber tubing. A Bunsen burner was burning under the retort, which was partly filled with a dark-looking paste, not unlike shoe polish. The first step in the process, he said, was to separate the protein from the foreign matter contained in the retort and the second step was the isolation of the cystine.

Dr. Jones picked a vial, two inches tall, from a row on a shelf above his desk. The vial was half full of a white powder resembling powdered sugar. The powder was the precious cystine itself. There was about a hundred dollars' worth in the vial. The other vials contained various other protein acids in the form of crystals, the crystals in most cases, as in that of cystine, being so small that to the eye they appeared as a powder.

The fact that the cystine exhibited was obtained from sheep's wool led the reporter to inquire of the possibilities from a woolgrower's standpoint of seeing that sheep received an appropriate amount of this acid in their food. Dr. Jones said that this phase of the use of cystine had not been worked out, but he indicated that it was reasonable to assume that the result would be beneficial.

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AT this juncture Dr. Jones told of a new bread flour which the bureau has compounded for human consumption out of ordinary wheat flour and peanut flour. This flour was devised when it was noted how quickly rats developed into thriving animals upon being fed peanut meal. Bread cooked from this mixture was declared to be highly palatable and of equally as desirable a texture from the viewpoint of a baker as the wheat flour. The flour is slightly darker in color than the common household flour, but Dr. Jones, essaying the role of a domestic scientist, expressed the belief that this would not interfere with cake making and other finer angles of the kitchen art. This peanutted wheat flour is now being manufactured by one of the large milling concerns and the bureau is endeavoring to have other firms join in its production.

The effect of the new flour was noted first on rats. One was fed ordinary wheat flour and another was fed the same amount of the peanut wheat mixture. It was found that the rats receiving in their systems the peanut flour took on weight rapidly and evinced every sign of normal health, while the wheat-fed rats could be distinguished for their ruffled fur and subnormal physical appearance. All of which was another boost for the peanut.

The protein of the peanut, Dr. Jones discovered, provided all the essential amino acids necessary to the formation of muscle in cattle, and he is recommending to stock raisers the addition of peanut meal to corn and other grains used for feed. Corn alone, he finds, does not provide enough cystine for the normal growth of animals.

The protein division has not confined itself to investigation of the peanut. One of the most important experiments in the way of developing new sources of stock feed was that conducted with tomato seeds, of which it is estimated about 1,500 tons are wasted annually in the canning industry. Rats also were made use of to test the nutritive value of the seeds, and the observation of officials in these tests is contained in the following formal summary:

"A diet in which tomato press cake furnished the sole source of protein and water-soluable vitamine enabled albino rats to grow at the normal rate. Such a diet was made adequate by the addition of starch, a suitable inorganic salt mixture, butter fat and lard. Normal growth was also obtained when the butter fat of the above diet was replaced by lard."

The tomato seed press cake to which reference is made was obtained by compressing a mass of tomato seeds until virtually all the water and juices had been expelled. The cake was then ground into a meal. In the compressing process a valuable table oil of red tinged composes about 22 per cent of the seed, it has been found. The press cake has been used to some extent in the past as a fertilizer and to a limited extent as a cattle feed. With the announcement by the bureau of chemistry that this press cake is as valuable a protein concentrate as the peanut, stock raisers are rapidly securing supplies of the new feed.

In the series of experiments, with the rats as victims, the following composition of diet was used: Tomato seed press cake, 50 grams; starch, 21 grams; salt mixture, 4 grams; butter fat, 10 grams, and lard 15 grams. Some of the rats exceeded normal growth on this diet.

* * * *

DR. JONES has on his desk samples of nearly every edible bean grown in this country and abroad. Many of the specimens have been tested for their nutritive qualities among them the lima bean, of which it was found that unless supplemented with the valuable cystine it did not encourage growth. A diet of cooked lima bean meal, supplemented with three-tenths per cent of cystine, furnished adequate protein for the normal growth of albino rats, it was found. Another test was made with Chinese and Georgia velvet beans and with the oriental adsuki bean. Many other beans are being fed the rats, while results are noted.

Assisting Dr. Jones in conducting the nutrition investigations are A. J. Finks, who has charge of the animal room; H. C. Waterman, C. E. F. Gersdorff, S. Phillips and Otto Moeller.

The series of researches carried on by these men has irrefutably brought out that unless animals are afforded cystine in their food they fail to attain normal growth and occasionally die. The same conditions apply to human beings, it is said. With this fact in mind, the inquiring reporter asked Dr. Jones how it was that many persons never eat peanuts and yet do not appear to be losing their grip on life. To this the nutrition expert replied that peanuts were only one of many sources of cystine. Eggs, milk and various dairy products also are rich in the acid, he pointed out, and are a number of other foods found on the dinner table of the average American family.

Peanuts, however, the experiments with the rats showed, instead of being a second-rate sideshow confection, should hold a commanding place in the halls of domestic cookery.

And, as the young ladies with the bobbed locks have ascertained, also in the realm of tonsorial artistry.



CHEMISTS OF UNCLE SAM'S BUREAU OF CHEMISTRY, DEPARTMENT OF AGRICULTURE. LEFT TO RIGHT: DR. D. BREESE JONES, ORGANIC CHEMIST IN CHARGE; H. J. FINKS, ASSOCIATE CHEMIST; H. C. WATERMAN, ASSISTANT CHEMIST; C. E. GERSDORFF, CHEMICAL LABORATORIAN; S. PHILLIPS, CHEMIST'S AIDE, AND O. MOELLER, CHEMIST'S AIDE.

HOME ECONOMICS.

BY MRS. ELIZABETH KENT.

Stoking the Engine.

It makes a difference in the efficiency of any engine how and when as well as with what fuel it is fed. You cannot put in a day's supply of fuel all at once, nor in huge masses nor in continuous minute quantities. If the fires are choked with ashes or waste, they will not burn fuel will fall through a grate if it is too fine, will not take fire if it is too coarse. So with food—the fuel of the human engine—there are a good many things to consider in the balanced diet besides the food elements. Meat and molasses are just as truly protein and carbohydrates as meat and bread, but who wants to eat the combination? Cottage cheese or beans may alone supply the required amount of protein, but who can eat either three times a day for many days? The required amounts might be given in one meal, or two, or a dozen, but it makes a great deal of difference to the body.

Food must be changed a good deal in that strange long tract we call the alimentary canal before it can function in the living cells where energy is set free and new cells are building all the time. If the food irritates the sensitive walls of stomach or intestines, the whole body is depressed and the cells may be unable to use the food when it reaches them. If it is crowded along too fast, with no time for rest for the digestive organs between meals, these organs one or several, may simply go on strike and leave the cells to starve in the midst of plenty. The purpose of digestive action is to make all food fluid, to separate all proteins into their amino-acid elements, to break up all fats into two parts, which are soluble in the digestive fluids, and to reduce all carbohydrates to simple sugars. In these simple forms foods can pass into the blood stream and thence into the tissues. This work is done partly by mechanical action, partly by chemical. It begins when food is put into the mouth, and to be successful, must follow its orderly process uninterrupted until the simplified products pass through the intestinal walls into the blood and lymph, while all waste, like ashes, is eliminated regularly and completely. A fireman knows that he cannot play tricks in feeding his engine. We are more ignorant than he in the way we treat ours.

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Test of Contentment.

From the Birmingham Herald.

"Just what is a model wife?"

"Opinions differ. According to my friend, Dubwaite, a model wife is one who can view the luxurious life portrayed in photoplays and return to a $50 flat with a disposition to make the best of it."